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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,042	10/19/2005	Joseph P Kennedy JR.	GRA26 002	4673

7590

05/22/2006

Mark C Comtois
Duane Morris
Suite 700
1667 K Street NW
Washington, DC 20006

EXAMINER

AFSHAR, KAMRAN

ART UNIT PAPER NUMBER

2617

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/531,042

Applicant(s)

KENNEDY ET AL.

Examiner

Kamran Afshar, 571-272-7796

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-19-2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Saleh (U.S. Patent 6,212,391 B1).

With respect to claims 1, 5, Saleh discloses in a wireless communication system having a

plurality of base stations defining a signal coverage area for communicating with a mobile-appliance, and having a mobile-appliance location determining system (See e.g. 111, 113 of Fig. 2) for determining the location of the mobile-appliance in the coverage area, a method of collecting test and measurement data (See e.g. Title, Abstract, Figs. 3-12), comprising the steps of: (a) selecting one of the plural base stations to search for a transmitting mobile appliance; (b) at the selected one of the plural base stations, searching for a transmitting mobile appliance; (c) once a transmitting mobile appliance is detected (See e.g. Steps 901-917 of Fig. 9), determining if the quality of the signal reception from the transmitting mobile appliance is acceptable (See e.g. Step 907 of Fig. 9); (d) selecting a set of the plural base stations in the vicinity of the transmitting mobile appliance; (e) at ones of the plural base stations in the selected set, measuring the signal received from the transmitting mobile-appliance; and, (f) storing the (See e.g. 131, 141 of Fig. 2, Co. 4, Lines 7-14) measured signal data (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 2, Saleh discloses searching for a transmitting mobile appliance inherently comprises the step of scanning frequency, time slot and code as a function of a set of operating parameters (See e.g. GSM system, PCS 1900, etc) of the wireless communication system (See e.g. 301 of Fig. 3, Co. 5, Lines 55-67, 901 of Fig. 9, Co. Co. 9, Lines 17-31).

Regarding claim 3, Saleh discloses determining the signal quality is inherently a function of at least one of a received signal strength, a bit error rate or a frame error rate (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 4, Saleh discloses measuring at one of the plural base stations in the selected set includes measuring the carrier to interference ratio and received signal strength (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 5, Saleh discloses measuring at one of the plural base stations in the selected set includes the steps of obtaining a signal sample from the transmitting mobile-appliance (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 6, Saleh discloses measuring at one of the plural base stations in the selected set includes the step of extracting information in the transmitting mobile appliance's signal (See e.g. Co.

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3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 7, Saleh discloses extracting information includes the steps of demodulating and decoding the transmitting mobile-appliance's signal (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 8, Saleh discloses the information in the transmitting mobile appliance's signal comprises handoff assistance data (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 9, Saleh discloses the signal sample comprises handoff assistance data (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 10, Saleh discloses the handoff assistance data comprises a received signal strength measured at the mobile appliance from at least one of the plural base stations in the selected set (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 11, Saleh discloses aborting the collection of test and measurement data if the system is tasked to locate a mobile appliance.

With respect to claim 12, Saleh discloses in a method of collecting test and measurement data from a wireless communication system having a plurality of base stations defining a signal coverage area for communication with a mobile-appliance (See e.g. Title, Abstract, Figs. 3-12), wherein the base stations inherently communicate with the mobile-appliance on a forward link (or downlink) transmission and the mobile appliance inherently communicates with the base station on a reverse link (or uplink) transmission, the improvement comprising collecting forward and reverse data with equipment installed at the base stations only (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 13, Saleh discloses that inherently the reverse link data and the forward link data are collected substantially simultaneously (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 14, Saleh discloses the forward link data includes received signal strength from one or more neighboring base stations (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 -

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Co. 6, Line 25, Figs. 1-6).

Regarding claim 15, Saleh discloses collecting forward and reverse data is accomplished during a process of geo-locating the mobile appliance (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 16, Saleh discloses the step of extracting the reverse data from the transmitting mobile-appliances signal (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 17, Saleh discloses extracting comprises the steps of demodulating and decoding a portion of the transmitting mobile-appliances signal (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

With respect to claim 18, Saleh discloses in a method of collecting test and measurement data in a wireless communication system having a plurality of base stations defining a signal coverage area for communicating with a mobile-appliance (See e.g. Title, Abstract, Figs. 3-12), the improvement wherein the test and measurement data is collected from transmissions between the mobile-appliance and the base stations during normal operation of the communication system (See e.g. Idle mode, engaged in a call, and not engaged in a call, Co. 1, Lines 34-36) and without adding any calling traffic to the network (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 19, Saleh discloses the wireless communication system further comprises a geo-location system for locating a mobile appliance within the communication system and the test and measurement data is collected by the geo-location system (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

With respect to claim 20, Saleh discloses collecting test and measurement data in a wireless communication system inherently having a plurality of base stations defining a signal coverage area for communicating with a mobile-appliance (See e.g. Title, Abstract, Figs. 3-12) and having a mobile appliance location determining system for determining the location of the mobile appliance in the coverage area, the improvement wherein the test and measurement data is collected by the location determining system (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 21, Saleh discloses the location determining system collects the data during the process of locating the mobile appliance in response to a geo-location request (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 22, Saleh discloses the location determining system collects the data only when the location determining system is in an otherwise idle state (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 23, Saleh discloses the location determining system aborts the collection of data when a geolocation request is received by the location determining system (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

With respect to claim 24, Saleh discloses a wireless communication system (See e.g. GSM system and or PCS 1900) with a network overlay geo-location system for locating mobile appliances (See e.g. 102 of Fig. 2) in communication with the wireless communication system a method for system-initiated test and measurement data collection (See e.g. Title, Abstract, Figs. 3-12) comprising the steps of selecting a probe area and tasking a probe geo-location sensor associated with the probe area to search for an active mobile appliance operating within the probe area (See e.g. Idle mode, engaged in a call, and not engaged in a call, Co. 1, Lines 34-36); selecting a probe mobile appliance from the probe area; selecting other geo-location sensors proximate to the probe area to detect a signal from the probe mobile appliance (See e.g. 113 of Fig. 2); measuring geo-location parameters and signal quality parameters of the probe mobile appliance signal (See e.g. Co. 4, Lines 7-14) at the probe geo-location sensor and at ones of the other geo-location sensors (See e.g. 102, 113, 117, 159, 177 of Fig. 2); storing the measured signal quality parameters; and, monitoring for receipt of a location request by the geo-location system and aborting the system-initiated (See e.g. Steps 1101-1119 of Fig. 11) test and measurement data collection after receipt of a location request by the geo-location system (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 25, Saleh discloses the geo-location parameters are selected from the group of TOA and AOA measurements (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 26, Saleh discloses the signal quality parameters are selected from the group of carrier signal to interference ratio, received signal strength, bit error rate, frame error rate, and signal to noise ratio (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 27, Saleh discloses extracting handoff assistance information from the probe mobile appliance (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 28, Saleh discloses extracting includes the step of demodulating and decoding a portion of the probe mobile appliance signal, portion determined by frequency of handoff assistance information (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 29, Saleh discloses searching for an active mobile appliance comprises the step of scanning frequency, time slot and code as a function of operating parameters of the wireless communication system (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

With respect to claim 30, Saleh discloses in a method of operating a geo-location system that geo-locates a mobile appliance in response to an external geo-location request where the mobile appliance is in communication with a wireless communication system (See e.g. GSM and or PCS 1900 system of Figs 1-2) including a network overlay geo-location system with plural base stations where each of the base stations serves at least one sector (See e.g. Title, Abstract, Figs. 3-12), the improvement comprising collecting test and measurement information with the geo-location system when the geo-location system is in an (See e.g. Idle mode, engaged in a call, and not engaged in a call, Co. 1, Lines 34-36) otherwise idle state (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 31, Saleh discloses the collecting of test and measurement information is aborted when the geo-location system is no longer in the idle state (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 32, Saleh discloses the test and measurement information is collected without adding calling traffic to the wireless communication system (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 33, Saleh discloses the test and measurement information is inherently collected on both forward and reverse communication links substantially simultaneously (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 34, Saleh discloses the test and measurement information is collected on equipment installed only at ones of the plural base stations (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 35, Saleh discloses the test and measurement information is collected from plural sectors according to a predetermined schedule (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 36, Saleh discloses the test and measurement information includes obtaining signal quality parameters for a probe mobile appliance (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 37, Saleh discloses the signal quality parameters are inherently selected from the group of carrier signal to interference ratio, received signal strength, bit error rate, frame error rate, and signal to noise ratio (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 38, Saleh discloses the step of extracting handoff assistance information from the probe mobile appliance (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 39, Saleh discloses the step of extracting inherently includes the step of demodulating and decoding a portion of the signal from the probe mobile appliance wherein portion is determined by frequency of handoff assistance information (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

Regarding claim 40, Saleh discloses the handoff assistance information inherently includes received signal strength from ones of plural base stations (See e.g. Co. 3, Line 35 - Co. 4, Line 58, Co. 5, Line 55 - Co. 6, Line 25, Figs. 1-6).

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Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Anttila (U.S. Pub. No.: 2004/0198279 A1).
- b) Dupray (U.S. Pub. No.: 2004/0266457 A1).
- c) Gayford (U.S. Pub. No.: 2004/0220728 A1).
- d) Richton (U.S. Pub. No.: 2002/0175855 A1).
- e) Tee (U.S. Pub. No.: 2002/0111158 A1).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Feild, Joseph** can be reached @ (571) 272-4090. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kamran Afshar


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER